

January 12, 1949.

Dr. I. C. Gunsalus,  
Dept. Bacteriology,  
Indiana University,  
Bloomington, Ia.

Dear Gunsalus,

I certainly had a very nice time talking to you and the rest of the crowd at Bloomington.

K-12 has been sent, separately, to Luria. Your samples were delivered to Snell.

To get chloroacetate resistant mutants, neutralize a solution of mono-chloroacetic acid to pH 7 with NaOH, and make up to 5g%, in terms of the acid. This has to be sterile filtered, as it is somewhat unstable in the autoclave. Add 1:50 to molten nutrient agar to give a final concentration of 1 mg/ml. Streak K-12 rather heavily, and you should get a sparse background growth with numerous resistant papillae. These papillae are easily purified by a couple of streakings out, and should turn out to be anaerogenic (i.e. in ordinary fermentation tubes with glucose.) Strangely enough, as Penfold reported, gas is produced from mannitol, so that formate is probably not the only source of hydrogen.

As I'd suspected, cells of a  $Lac_1$ -mutant grown on butyl galactoside ferment lactose vigorously; when grown in the presence of lactose, they show nothing at all, by way of lactose fermentation or galactosidase.

Sincerely

Joshua Lederberg